

## Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)  
Issue date: 4/6/2026 Version: 1.0

### SECTION 1 Identification

#### 1.1. Product identifier

Product form : Mixture  
Product name : Group 5- Heat and Oil Resistance Cover Stock  
Product code : 5850

#### 1.2. Other means of identification

No additional information available

#### 1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Manufacture of rubber products  
Restrictions on use : Not determined

#### 1.4. Supplier's details

Fenner Dunlop Americas  
200 Corporate Center Drive, Suite 220  
Coraopolis, PA, 15108  
T 412-249-0700  
[info@fennerdunlop.com](mailto:info@fennerdunlop.com)

#### 1.5. Emergency phone number

Emergency number : CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3877 (24/7)

### SECTION 2 Hazard Identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Skin sensitization, Category 1	H317	May cause an allergic skin reaction.
Carcinogenicity, Category 2	H351	Suspected of causing cancer.
Reproductive toxicity, Category 1B	H360	May damage fertility or the unborn child.
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment — Chronic Hazard, Category 2	H411	Toxic to aquatic life with long lasting effects.

Full text of H statements : see section 16

#### 2.2. Label elements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H317 - May cause an allergic skin reaction  
H351 - Suspected of causing cancer.  
H360 - May damage fertility or the unborn child  
H400 - Very toxic to aquatic life  
H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS US) :

P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P261 - Avoid breathing dust, fume, gas, mist, vapors, spray.

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P272 - Contaminated work clothing must not be allowed out of the workplace.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.  
P302+P352 - If on skin: Wash with plenty of water.  
P308+P313 - If exposed or concerned: Get medical advice/attention.  
P321 - Specific treatment (see supplemental first aid instruction on this label).  
P333+P313 - If skin irritation or rash occurs: Get medical advice or attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P391 - Collect spillage.  
P405 - Store locked up.  
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

### 2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

### 2.4. Hazards not otherwise classified

No additional information available

### 2.5. Unknown acute toxicity

No additional information available

## SECTION 3 Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
Carbon black	CAS-No.: 1333-86-4	10 – 30	Carc. 2, H351
Zinc oxide (ZnO)	CAS-No.: 1314-13-2	1 – 5	Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Thiram	CAS-No.: 137-26-8	0.5 – 1.5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
N-tert-Butyl-2-benzothiazolesulfenamide	CAS-No.: 95-31-8	0.5 – 1.5	Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4,4'-Dithiodimorpholine	CAS-No.: 103-34-4	0.1 – 1	Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 2, H411
Formaldehyde, polymer with N-phenylbenzenamine and 2-propanone	CAS-No.: 9003-80-9	0.1 – 1	Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Chronic 4, H413

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Name	Product identifier	%	GHS US classification
N,N'-Diphenyl-p-phenylenediamine	CAS-No.: 74-31-7	0.1 – 1	Skin Sens. 1, H317 Aquatic Chronic 3, H412
2H-Benzimidazole-2-thione, 1,3-dihydro-4(or 5)-methyl-, zinc salt (2:1)	CAS-No.: 61617-00-3	0.1 – 1	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Sens. 1B, H317 Repr. 1B, H360 STOT RE 2, H373 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

## SECTION 4 First aid measures

### 4.1. Description of necessary first-aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.
Personal protection for first-aid responders.	: First-aiders should consider self-protection and use the recommended personal protective equipment (see section 8).

### 4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	: None under normal conditions. Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.
Symptoms/effects after eye contact	: None under normal conditions. Dust from this product may cause eye irritation.
Symptoms/effects after ingestion	: None under normal conditions.
Chronic symptoms	: May damage fertility or the unborn child.

### 4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	: Treat symptomatically.
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## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire	: Exercise caution when fighting any chemical fire.
Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.

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Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6 Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

##### For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Avoid breathing dust/fume/gas/mist/vapors/spray.

##### For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel.

Environmental precautions : Avoid release to the environment. Notify authorities if product enters sewers or public waters.

#### 6.2. Methods and materials for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

For further information refer to section 13.

### SECTION 7 Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

#### 7.2. Conditions for safe storage, including incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.

Storage conditions : Store locked up.

### SECTION 8 Exposure controls/personal protection

#### 8.1. Control parameters

##### Carbon black (1333-86-4)

##### USA - ACGIH® - Threshold Limit Values

ACGIH® TLV® TWA	3 mg/m <sup>3</sup> (inhalable particulate matter)
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<b>Carbon black (1333-86-4)</b>	
ACGIH® chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
<b>USA - OSHA - Occupational Exposure Limits</b>	
OSHA PEL TWA	3.5 mg/m <sup>3</sup>
<b>USA - IDLH - Occupational Exposure Limits</b>	
IDLH	1750 mg/m <sup>3</sup>
<b>USA - NIOSH - Occupational Exposure Limits</b>	
NIOSH REL (TWA)	3.5 mg/m <sup>3</sup> 0.1 mg/m <sup>3</sup> (Carbon black in presence of Polycyclic aromatic hydrocarbons)
<b>Zinc oxide (ZnO) (1314-13-2)</b>	
<b>USA - ACGIH® - Threshold Limit Values</b>	
ACGIH® TLV® TWA	2 mg/m <sup>3</sup> (respirable particulate matter)
ACGIH® TLV® STEL	10 mg/m <sup>3</sup> (respirable particulate matter)
<b>USA - OSHA - Occupational Exposure Limits</b>	
OSHA PEL TWA	5 mg/m <sup>3</sup> (fume) 15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction)
<b>USA - IDLH - Occupational Exposure Limits</b>	
IDLH	500 mg/m <sup>3</sup>
<b>USA - NIOSH - Occupational Exposure Limits</b>	
NIOSH REL (TWA)	5 mg/m <sup>3</sup> (dust and fume)
NIOSH REL (STEL)	10 mg/m <sup>3</sup> (fume)
NIOSH REL (Ceiling)	15 mg/m <sup>3</sup> (dust)
<b>Silica, amorphous, precipitated and gel (112926-00-8)</b>	
<b>USA - OSHA - Occupational Exposure Limits</b>	
OSHA PEL TWA	20 mppcf
<b>Thiram (137-26-8)</b>	
<b>USA - ACGIH® - Threshold Limit Values</b>	
ACGIH® TLV® TWA	0.05 mg/m <sup>3</sup> (inhalable fraction and vapor)
ACGIH® chemical category	Not Classifiable as a Human Carcinogen, dermal sensitizer
<b>USA - OSHA - Occupational Exposure Limits</b>	
OSHA PEL TWA	5 mg/m <sup>3</sup>
<b>USA - IDLH - Occupational Exposure Limits</b>	
IDLH	100 mg/m <sup>3</sup>
<b>USA - NIOSH - Occupational Exposure Limits</b>	
NIOSH REL (TWA)	5 mg/m <sup>3</sup>

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

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### 8.3. Individual protection measures, such as personal protective equipment

#### Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:				
Type	Material	Permeation	Thickness (mm)	Penetration
Disposable gloves	Nitrile rubber (NBR)			
Eye protection:				
Safety glasses				
Skin and body protection:				
Wear suitable protective clothing				
Respiratory protection:				
[In case of inadequate ventilation] wear respiratory protection.				

#### Personal protective equipment symbol(s):



## SECTION 9 Physical and chemical properties

### 9.1. Basic physical and chemical properties

Physical state	: Solid
Appearance	: Opaque.
Color	: Black
Odor	: Odorless
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: 1.18
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: Not applicable
Explosion limits	: Not applicable
Particle characteristics	: No data available

### 9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

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### SECTION 10 Stability and reactivity

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

Strong oxidizing agents.

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### SECTION 11 Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified.  
Acute toxicity (dermal) : Not classified.  
Acute toxicity (inhalation) : Not classified.

Carbon black (1333-86-4)	
LD50 oral rat	> 10000 mg/kg (Source: ECHA)
LD50 dermal rabbit	> 2000 mg/kg (Source: ECHA_API)
Zinc oxide (ZnO) (1314-13-2)	
LD50 oral rat	> 5000 mg/kg (Source: EU_RAR)
LD50 dermal rat	> 2000 mg/kg (Source: ECHA)
LC50 Inhalation - Rat	> 5700 mg/m <sup>3</sup> (Exposure time: 4 h Source: ECHA_API)
4,4'-Dithiodimorpholine (103-34-4)	
LD50 oral rat	4300 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	> 5010 mg/kg (Source: EPA_HPVS)
ATE US (oral)	4300 mg/kg body weight
Thiram (137-26-8)	
LD50 oral rat	1080 mg/kg (Source: EPA_HPVS)
LD50 dermal rabbit	> 7940 mg/kg (Source: CHEMVIEW)
LC50 Inhalation - Rat	500 mg/m <sup>3</sup> (Exposure time: 4 h Source: NLM_CIP)
ATE US (oral)	500 mg/kg body weight
ATE US (dust, mist)	1.5 mg/l/4h

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<b>N-tert-Butyl-2-benzothiazolesulfenamide (95-31-8)</b>	
LD50 oral rat	6310 mg/kg (Source: ECHA_API)
LD50 dermal rabbit	> 7940 mg/kg (Source: NLM_CIP)
ATE US (oral)	6310 mg/kg body weight
<b>Formaldehyde, polymer with N-phenylbenzenamine and 2-propanone (9003-80-9)</b>	
LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)
LC50 Inhalation - Rat	> 5 mg/l/4h
<b>N,N'-Diphenyl-p-phenylenediamine (74-31-7)</b>	
LD50 oral rat	2370 mg/kg (Source: NLM_CIP)
ATE US (oral)	2370 mg/kg body weight
<b>2H-Benzimidazole-2-thione, 1,3-dihydro-4(or 5)-methyl-, zinc salt (2:1) (61617-00-3)</b>	
LD50 oral rat	390 mg/kg (Source: NLM_CIP)
LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)
LC50 Inhalation - Rat	> 2.12 mg/l/4h
ATE US (oral)	390 mg/kg body weight
ATE US (dust, mist)	1.5 mg/l/4h
Skin corrosion/irritation	: Not classified.
<b>Zinc oxide (ZnO) (1314-13-2)</b>	
pH	6.95 (American Process)
Serious eye damage/irritation	: Not classified.
<b>Zinc oxide (ZnO) (1314-13-2)</b>	
pH	6.95 (American Process)
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified.
Carcinogenicity	: Suspected of causing cancer.
<b>Carbon black (1333-86-4)</b>	
IARC group	2B - Possibly carcinogenic to humans
In OSHA Hazard Communication Carcinogen list	Yes
<b>Thiram (137-26-8)</b>	
IARC group	3 - Not classifiable
Reproductive toxicity	: May damage fertility or the unborn child.
STOT-single exposure	: Not classified.
<b>4,4'-Dithiodimorpholine (103-34-4)</b>	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified.
<b>Thiram (137-26-8)</b>	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
<b>Formaldehyde, polymer with N-phenylbenzenamine and 2-propanone (9003-80-9)</b>	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

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2H-Benzimidazole-2-thione, 1,3-dihydro-4(or 5)-methyl-, zinc salt (2:1) (61617-00-3)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified.

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Viscosity, kinematic	Not applicable
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Symptoms/effects after inhalation : None under normal conditions. Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.

Symptoms/effects after skin contact : May cause an allergic skin reaction.

Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.

Symptoms/effects after ingestion : None under normal conditions.

Chronic symptoms : May damage fertility or the unborn child.

## SECTION 12 Ecological information

### 12.1. Ecotoxicity

Ecology - general : Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.

Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.

Zinc oxide (ZnO) (1314-13-2)	
LC50 - Fish [1]	1.55 mg/l (Exposure time: 96 h - Species: Danio rerio [static] Source: ECHA)

Thiram (137-26-8)	
LC50 - Fish [1]	0.0003 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static] Source: EPA)
EC50 - Crustacea [1]	0.21 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 - Fish [2]	0.13 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus Source: IUCLID)
EC50 96h - Algae [1]	< 0.1 mg/l (Species: Desmodesmus subspicatus)
NOEC (acute)	225 mg/kg (Exposure time: 14 Days - Species: Eisenia foetida [soil dry weight])

N-tert-Butyl-2-benzothiazolesulfenamide (95-31-8)	
LC50 - Fish [1]	> 0.3 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static] Source: IUCLID)
EC50 - Crustacea [1]	> 0.3 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 - Fish [2]	> 0.3 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static] Source: IUCLID)
EC50 96h - Algae [1]	> 0.3 mg/l (Species: Pseudokirchneriella subcapitata)

2H-Benzimidazole-2-thione, 1,3-dihydro-4(or 5)-methyl-, zinc salt (2:1) (61617-00-3)	
LC50 - Fish [1]	5.6 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static] Source: ECHA)

### 12.2. Persistence and degradability

Group 5- Heat and Oil Resistance Cover Stock	
Persistence and degradability	Not rapidly degradable

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### 12.3. Bioaccumulative potential

#### 4,4'-Dithiodimorpholine (103-34-4)

Partition coefficient n-octanol/water (Log Pow) 2.67 (at 22 °C (at pH 7.7))

#### Thiram (137-26-8)

BCF - Fish [1] (91 dimensionless)

Partition coefficient n-octanol/water (Log Pow) 1.9 (at pH 10)

#### N-tert-Butyl-2-benzothiazolesulfenamide (95-31-8)

Partition coefficient n-octanol/water (Log Pow) 3.36 (at 25 °C (at pH 6.9))

#### Formaldehyde, polymer with N-phenylbenzenamine and 2-propanone (9003-80-9)

Partition coefficient n-octanol/water (Log Pow) > 6.5 (at pH 7)

#### N,N'-Diphenyl-p-phenylenediamine (74-31-7)

BCF - Fish [1] 500 - 2150

Partition coefficient n-octanol/water (Log Pow) 3.4 (at 23 °C (at pH 6.4))

#### 2H-Benzimidazole-2-thione, 1,3-dihydro-4(or 5)-methyl-, zinc salt (2:1) (61617-00-3)

Partition coefficient n-octanol/water (Log Pow) 3.07 (at 20.5 °C (at pH >=6.3-<=6.5))

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Ozone : Not classified.

Fluorinated greenhouse gases : No

## SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.  
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Sewage disposal recommendations : Disposal must be done according to official regulations.  
Product/Packaging disposal recommendations : Comply with applicable regulations for solid waste disposal. Disposal must be done according to official regulations.  
Additional information : Do not re-use empty containers.  
Ecological waste information : The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.

## SECTION 14 Transport information

In accordance with DOT / IMDG / IATA

### 14.1. UN number

UN-No. (DOT) : UN3077

UN-No. (IMDG) : 3077

UN-No. (IATA) : 3077

### 14.2. UN Proper Shipping Name

Proper Shipping Name (DOT) : Environmentally hazardous substances, solid, n.o.s. zinc oxide, thiram

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Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. zinc oxide, thiram  
Proper Shipping Name (IATA) : Environmentally hazardous substance, solid, n.o.s. zinc oxide, thiram

### 14.3. Transport hazard class(es)

#### DOT

Transport hazard class(es) (DOT) : 9  
Hazard labels (DOT) : 9



#### IMDG

Transport hazard class(es) (IMDG) : 9  
Hazard labels (IMDG) : 9



#### IATA

Transport hazard class(es) (IATA) : 9  
Hazard labels (IATA) : 9



### 14.4. Packing group

Packing group (DOT) : III  
Packing group (IMDG) : III  
Packing group (IATA) : III

### 14.5. Environmental hazards

Dangerous for the environment : Yes  
Marine pollutant : Yes



Other information : No supplementary information available.

### 14.6. Transport in bulk

Not applicable

### 14.7. Special precautions for user

#### DOT

UN-No. (DOT) : UN3077

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DOT Special Provisions (49 CFR 172.102)	: 8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.", as appropriate. In addition, for solid materials, special provision B54 applies. 146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination. 335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s," UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging. 384 - For transportation by motor vehicle, substances meeting the conditions for high viscosity flammable liquids as prescribed in §173.121(b)(1)(i), (b)(1)(ii), and (b)(1)(iv) of this subchapter, may be reassigned to Packing Group III under the following conditions: A112 - Notwithstanding the quantity limits shown in Column (9A) and (9B) for this entry, the following IBCs are authorized for transportation aboard passenger and cargo-only aircraft. Each IBC may not exceed a maximum net quantity of 1,000 kg: a. Metal: 11A, 11B, 11N, 21A, 21B and 21N b. Rigid plastics: 11H1, 11H2, 21H1 and 21H2 c. Composite with plastic inner receptacle: 11HZ1, 11HZ2, 21HZ1 and 21HZ2 d. Fiberboard: 11G e. Wooden: 11C, 11D and 11F (with inner liners) f. Flexible: 13H2, 13H3, 13H4, 13H5, 13L2, 13L3, 13L4, 13M1 and 13M2 (flexible IBCs must be sift-proof and water resistant or must be fitted with a sift-proof and water resistant liner). B54 - Open-top, sift-proof rail cars are also authorized. B120 - The use of flexible bulk containers conforming to the requirements in subpart R and subpart S of part 178 of this subchapter is permitted. IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2). IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner. N20 - A 5M1 multi-wall paper bag is authorized if transported in a closed transport vehicle. N91 - The use of a non specification sift-proof, non-bulk, metal can with or without lid, or a non specification sift-proof, non-bulk fiber drum, with or without lid is authorized when transporting coal tar pitch compounds by motor vehicle or rail freight. The fiber drum must be fabricated with a three ply wall, as a minimum. The coal tar pitch compound must be in a solid mass during transportation. T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2) TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 155
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 213
DOT Packaging Bulk (49 CFR 173.xxx)	: 240
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: No Limit

# Group 5- Heat and Oil Resistance Cover Stock

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DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : No Limit  
DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

### IMDG

Special provision (IMDG) : 274, 335, 375, 966, 967, 969  
Limited quantities (IMDG) : 5 kg  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : LP02, P002  
Packing provisions (IMDG) : PP12  
IBC packing instructions (IMDG) : IBC08  
IBC special provisions (IMDG) : B3  
Tank instructions (IMDG) : BK1, BK2, BK3, T1  
Tank special provisions (IMDG) : TP33  
EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE  
EmS-No. (Spillage) : S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS  
Stowage category (IMDG) : A  
Stowage and handling (IMDG) : SW23

### IATA

Special provision (IATA) : A97, A158, A179, A197, A215  
PCA Excepted quantities (IATA) : E1  
PCA Limited quantities (IATA) : Y956  
PCA limited quantity max net quantity (IATA) : 30kgG  
PCA packing instructions (IATA) : 956  
PCA max net quantity (IATA) : 400kg  
CAO packing instructions (IATA) : 956  
CAO max net quantity (IATA) : 400kg  
ERG code (IATA) : 9L

## SECTION 15 Regulatory information

### 15.1. Federal regulations

#### Group 5- Heat and Oil Resistance Cover Stock

SARA Section 311/312 Hazard Classes	Health hazard - Respiratory or skin sensitization Health hazard - Reproductive toxicity Health hazard - Carcinogenicity
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All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Thiram	CAS-No. 137-26-8	0.5 – 1.5%
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#### Thiram (137-26-8)

CERCLA RQ	10 lb
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# Group 5- Heat and Oil Resistance Cover Stock

## Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

### 15.2. International regulations

#### CANADA

##### Carbon black (1333-86-4)

Listed on the Canadian DSL (Domestic Substances List)

##### Zinc oxide (ZnO) (1314-13-2)

Listed on the Canadian DSL (Domestic Substances List)

##### 4,4'-Dithiodimorpholine (103-34-4)

Listed on the Canadian DSL (Domestic Substances List)

##### Thiram (137-26-8)

Listed on the Canadian DSL (Domestic Substances List)

##### N-tert-Butyl-2-benzothiazolesulfenamide (95-31-8)

Listed on the Canadian DSL (Domestic Substances List)

##### Formaldehyde, polymer with N-phenylbenzenamine and 2-propanone (9003-80-9)

Listed on the Canadian DSL (Domestic Substances List)

##### N,N'-Diphenyl-p-phenylenediamine (74-31-7)

Listed on the Canadian DSL (Domestic Substances List)

##### 2H-Benzimidazole-2-thione, 1,3-dihydro-4(or 5)-methyl-, zinc salt (2:1) (61617-00-3)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

##### Carbon black (1333-86-4)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

##### Zinc oxide (ZnO) (1314-13-2)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

##### 4,4'-Dithiodimorpholine (103-34-4)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

##### Thiram (137-26-8)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

##### N-tert-Butyl-2-benzothiazolesulfenamide (95-31-8)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

# Group 5- Heat and Oil Resistance Cover Stock

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### Formaldehyde, polymer with N-phenylbenzenamine and 2-propanone (9003-80-9)

Listed on the EU NLP (No Longer Polymers) inventory

### N,N'-Diphenyl-p-phenylenediamine (74-31-7)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

### 2H-Benzimidazole-2-thione, 1,3-dihydro-4(or 5)-methyl-, zinc salt (2:1) (61617-00-3)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

## National regulations

### Carbon black (1333-86-4)

Listed on IARC (International Agency for Research on Cancer)  
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)  
Listed on the NCI (Vietnam - National Chemical Inventory)  
Listed on Thailand Existing Chemicals Inventory (DIW)

### Zinc oxide (ZnO) (1314-13-2)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)  
Listed on the NCI (Vietnam - National Chemical Inventory)  
Listed on Thailand Existing Chemicals Inventory (DIW)

### 4,4'-Dithiodimorpholine (103-34-4)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)  
Listed on the NCI (Vietnam - National Chemical Inventory)  
Listed on Thailand Existing Chemicals Inventory (DIW)

# Group 5- Heat and Oil Resistance Cover Stock

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### Thiram (137-26-8)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)  
Listed on the NCI (Vietnam - National Chemical Inventory)  
Listed on Thailand Existing Chemicals Inventory (DIW)

### N-tert-Butyl-2-benzothiazolesulfenamide (95-31-8)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)  
Listed on the NCI (Vietnam - National Chemical Inventory)  
Listed on Thailand Existing Chemicals Inventory (DIW)

### Formaldehyde, polymer with N-phenylbenzenamine and 2-propanone (9003-80-9)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)  
Listed on the NCI (Vietnam - National Chemical Inventory)

### N,N'-Diphenyl-p-phenylenediamine (74-31-7)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)  
Listed on the NCI (Vietnam - National Chemical Inventory)  
Listed on Thailand Existing Chemicals Inventory (DIW)

# Group 5- Heat and Oil Resistance Cover Stock


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### 2H-Benzimidazole-2-thione, 1,3-dihydro-4(or 5)-methyl-, zinc salt (2:1) (61617-00-3)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)  
Listed on the NCI (Vietnam - National Chemical Inventory)  
Listed on Thailand Existing Chemicals Inventory (DIW)

### 15.3. State regulations

 **WARNING:** This product can expose you to Carbon black, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Component	State or local regulations
Carbon black(1333-86-4)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List
Zinc oxide (ZnO)(1314-13-2)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
Thiram(137-26-8)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

### SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

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#### Full text of hazard classes and H-statements

H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

# Group 5- Heat and Oil Resistance Cover Stock

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Full text of hazard classes and H-statements	
H413	May cause long lasting harmful effects to aquatic life

Safety Data Sheet (SDS), USA

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